

Product Description

The type RC3 is a stainless steel self centering rocker column load cell with complete hermetic sealing. It is a perfect fit for use in harsh industrial environments.

Application

- Weighbridges, hoppers, tanks and silos

Key Features

- Wide range of capacities from 7.5 t to 300 t
- Stainless steel construction
- Environmental Protection IP68 with complete hermetic sealing
- Self restoring design
- High input resistance
- Calibration in mV/V/Ω

Option

- Integrated surge protectors

Approvals

- OIML approval to C1 (Y = 5 000), C3, C3 MI8 and C4 (Y = 15 000)
- NTEP approval to 6 000 intervals, Class III (for 7.5 to 75 t)
- ATEX hazardous area approval for Zone 0, 1, 2, 20, 21 and 22
- FM hazardous area approval

Packed Weight

■ Capacity (t)	7.5	15	22.5	30	40
Weight (kg)	1.3	1.4	1.5	3.3	3.6
■ Capacity (t)	50	100	150	300	
Weight (kg)	4.5	4.7	8.5	26.5	

Available Accessories

- Compatible range of application hardware
- Compatible range of electronics

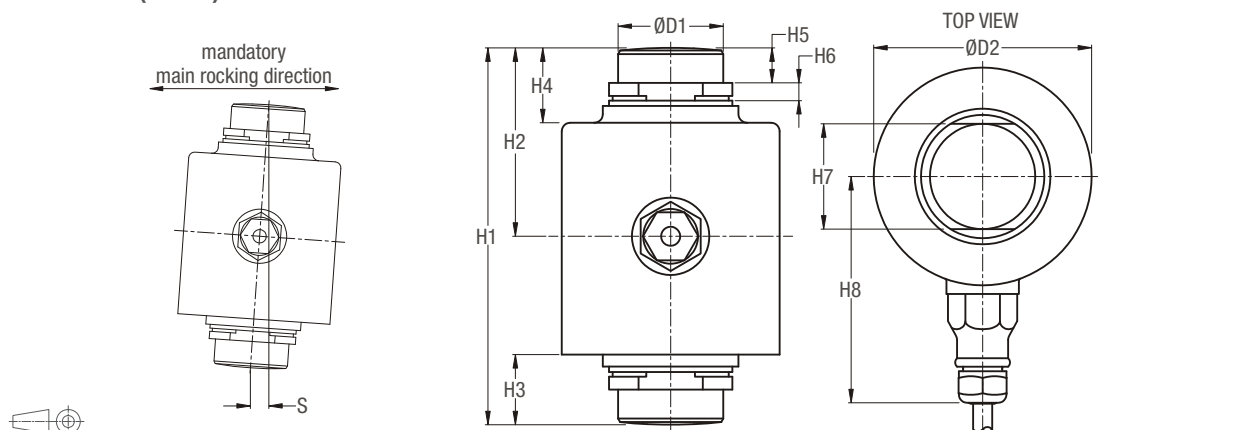
Specifications

	(E _{max})	t	7.5 / 15 / 22.5 / 30 / 40 / 50 / 100 / 150 / 300	7.5 / 15 / 22.5 / 30 / 40 / 50			
Maximum capacity	(E _{max})	t	7.5 / 15 / 22.5 / 30 / 40 / 50 / 100 / 150 / 300	7.5 / 15 / 22.5 / 30 / 40 / 50			
Minimum dead load	(E _{min})			2%*E _{max}			
Accuracy class according to OIML R60			(GP)	C1	C3	C3 MI 8	C4
Maximum number of verification intervals	(n _{LC})		n.a.	1 000	3 000		4 000
Minimum load cell verification interval	(v _{min})		n.a.	E _{max} / 5 000	E _{max} / 15 000		
Temp. effect on minimum dead load output	(TC ₀)	%*RO/10°C	≤ ± 0.0400	≤ ± 0.0280	≤ ± 0.0093		
Temperature effect on sensitivity	(TC _{RO})	%*RO/10°C	≤ ± 0.0200	≤ ± 0.0160	≤ ± 0.0100		≤ ± 0.0080
Combined error		%*RO	≤ ± 0.0500	≤ ± 0.0300	≤ ± 0.0200	≤ ± 0.0125	≤ ± 0.0180
Non-linearity		%*RO	≤ ± 0.0400	≤ ± 0.0300	≤ ± 0.0166	≤ ± 0.0166	≤ ± 0.0125
Hysteresis		%*RO	≤ ± 0.0400	≤ ± 0.0300	≤ ± 0.0166	≤ ± 0.0062	≤ ± 0.0125
Creep error (30 minutes) / DR		%*RO	≤ ± 0.0600	≤ ± 0.0490	≤ ± 0.0166	≤ ± 0.0062	≤ ± 0.0125
Rated Output	(RO)	mV/V		2 ± 0.1%			
Calibration in mV/V/Ω (A...I classified)		%		≤ ± 0.05 (≤ ± 0.005)			
Zero balance		%*RO		≤ ± 5			
Excitation voltage		V		5...15			
Input resistance	(R _{LC})	Ω		1 150 ± 50			
Output resistance	(R _{out})	Ω		1 000 ± 2			
Insulation resistance (100 V DC)		MΩ		≥ 5 000			
Safe load limit	(E _{lim})	%*E _{max}		200			
Ultimate load		%*E _{max}		300			
Compensated temperature range		°C		-10...+40			
Operating temperature range		°C		-40...+80 (ATEX -40...+60)			
Load cell material				stainless steel 17-4 PH (1.4548)			
Sealing				complete hermetic sealing; cable entry sealed by glass to metal header			
Protection according EN 60 529				IP68 (up to 2 m water depth) / IP69K			

The limits for Non-Linearity, Hysteresis, and TC_{RO} are typical values.

The sum of Non-linearity, Hysteresis and TC_{RO} meets the requirements according to OIML R60 with ρ_{LC}=0.7.

Dimensions (in mm)



Type	H1	H2	H3	H4	H5	H6	H7	H8	D1	D2	S _{max} *	RF**
RC3-7.5 t	89	44	17	23	11	6	28	75	28	65	4.5	11 kN
RC3-15 t	89	44	17	23	11	6	28	75	28	65	4.5	20 kN
RC3-22.5 t	89	44	17	23	11	6	28	75	28	65	4.5	30 kN
RC3-30 t	140	70	26	28	13	6.5	39	84	39	81	10.5	34 kN
RC3-40 t	150	75	31	33	13	11.7	39	84	39	81	10	37 kN
RC3-50 t	178	89	32	34	17	8.5	44	94	44	99	9	51 kN
RC3-100 t	178	89	38.5	38.5	17	12	62	93.8	62	141.3	11.5	152 kN
RC3-150 t	210	105	42.7	42.7	20.6	12.8	76.2	121.5	76.2	165.1	14.5	240 kN
RC3-300 t	280	140	55.9	55.9	25	21.5	100	121.5	100	165.1	15	468 kN

* S_{max} = maximum lateral displacement of load introduction. Recommended gap 2...3 mm for 7.5...22.5 t, 3...5 mm for 30...300 t.

** RF = restoring force at S_{max} and E_{max}.

Wiring

- The load cell is provided with a shielded, 4 conductor cable (AWG 24 for 7.5 to 22.5 t / AWG 20 for 30 to 300 t). Cable jacket polyurethane
- Cable length:

12 m	for 7.5 to 22.5 t
18 m	for 30 to 300 t
- Cable diameter:

5 mm	for 7.5 to 22.5 t
7.8 mm	for 30 to 300 t
- The shield is floating (On request the shield can be connected to the load cell body).

